



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/015,564      | 12/17/2001  | Takaaki Kutsuna      | 011709              | 6229             |

23850 7590 04/11/2003

ARMSTRONG, WESTERMAN & HATTORI, LLP  
1725 K STREET, NW  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

KEEHAN, CHRISTOPHER M

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1712

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/015,564

Applicant(s)

KUTSUNA ET AL.

Examiner

Christopher M. Keehan

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-18, 20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 5, 19, 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: throughout the specification, applicant refers to "metaxylylenediamine" and "methaxylylenediamine" interchangeably, and it is not clear which is the correct intended spelling. The "methaxylylenediamine" spelling is in the claims, so if this is not the intended spelling, then this should also be corrected. Appropriate correction is required.

### **Discussion of "X References" from the European Search Report**

Kobayashi et al. (4,957,980) was cited as an "x" reference, and was applied in the case. Ohtani et al. (4,542,070) was also cited, but this reference did not appear to disclose a polyfunctional compound having at least one acyl group; therefore, it was not applied.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18, 20, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear from the claims what is exactly being claimed. It is not clear if applicant is claiming one of the arrangements selected

Art Unit: 1712

from the groups or all of them. These claims have been interpreted to be any one of these configurations need be present to fulfill the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (4,957,980). Regarding claims 1 and 6, Kobayashi et al. disclose a composition with gas barrier properties (Abstract) comprising an epoxy resin (col.3, line 50-col.4, line 3, col.5, line 41-col.6, line 2 and Examples) and amine curing agent, wherein the amine curing agent is a reaction product of metaxylylenediamine (MXDA) and a polyfunctional compound having at least one acyl group which is capable of forming an amide group moiety by reaction with a polyamine to form an oligomer (col.2, line 53-col.3, line 17).

Regarding claim 2, Kobayashi et al. disclose an epoxy resin with a glycidylether moiety derived from the group as instantly claimed (col.3, line 50-col.4, line 3).

Claims 1-4, and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kihara et al. (EP 0709418 A2).

Regarding claims 1 and 6, Kihara et al. disclose a composition for coating and a coating

Art Unit: 1712

comprising an epoxy resin (page 5, lines 8-13) and amine curing agent, wherein the amine curing agent is a reaction product of metaxylylenediamine (MXDA) (page 3, lines 49-57) and a polyfunctional compound having at least one acyl group (page 4, lines 51-52) which is capable of forming an amide group moiety by reaction with a polyamine to form an oligomer (page 5, lines 5-7). Although Kihara et al. do not appear to specifically disclose a gas barrier property, this appears to be an inherent property of the composition of Kihara et al. because the materials of Kihara et al. are the same as instantly claimed, and the same materials would have inherently yielded a product with the same inherent properties. If not inherent, then it would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Kihara et al. to have the same inherent property as instantly claimed because the materials of Kihara et al. are the same as applicant's.

Regarding claim 2, Kihara et al. disclose an epoxy resin with a glycidylether moiety derived from the group as instantly claimed (page 5, lines 8-13).

Regarding claim 3, Kihara et al. disclose a polyamine that is the reaction product of xylylenediamine with epichlorhydrin (paragraph bridging pages 3 and 4), which is reacted with an epoxy (page 4, lines 22-28). This appears to the result in an epoxy resin with glycidylamine moiety derived from xylylenediamine.

Regarding claim 4, Kihara et al. disclose wherein the polyfunctional compound is selected from the group as instantly claimed (page 4, lines 51-52).

Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hamabuchi et al. (JP 63301264). Regarding claims 1 and 6, Hamabuchi et al. disclose a composition for coating and a coating comprising an epoxy resin and amine curing agent, wherein the amine curing agent is a reaction product of metaxylylenediamine (MXDA), and a polyfunctional compound having at least one acyl group which is capable of forming an amide group moiety by reaction with a polyamine to form an oligomer (Abstract). Although Hamabuchi et al. do not appear to specifically disclose a gas barrier property, this appears to be an inherent property of the composition of Hamabuchi et al. because the materials of Hamabuchi et al. are the same as instantly claimed, and the same materials would have inherently yielded a product with the same inherent properties. If not inherent, then it would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Hamabuchi et al. to have the same inherent property as instantly claimed because the materials of Hamabuchi et al. are the same as applicant's.

Regarding claim 2, Hamabuchi et al. disclose an epoxy resin with a glycidylether moiety derived from the group as instantly claimed (partial oral spot translation).

Regarding claim 4, Hamabuchi et al. disclose wherein the polyfunctional compound is selected from the group as instantly claimed (Abstract).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-18, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kihara et al. (EP 0709418 A2). Kihara et al., as applied above, as applied to claim 1 above, are as set forth and incorporated herein. Regarding claims 7, 12, 16, and 18, Kihara et al. do not appear to specifically disclose the instantly claimed substrates. Kihara et al. do disclose applying the coating to various substrates and can be used as an adhesive (page 2, lines 54-58). As adhesives are, by definition, applied between substrates to adhere something to something else (claim 12), and a polymeric substrate can be included in a variety of substrates (claim 7), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the coating of Kihara et al. on a wide variety of substrates, including polymeric substrates, and to have applied the coating between two substrates because that is how adhesives are applied, resulting in a more versatile product. Regarding the limitations in claims 7 and 12 concerning a gas barrier layer property, the same reasoning as set forth above for claim 1 concerning the gas barrier layer property also applies to claims 7 and 12. Regarding the plastics of claims 11 and 17, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a substrate of polyolefin, polyester, or polyamide as instantly claimed because these claimed polymers constitute virtually the whole range of plastic substrates. Polyolefins,

Art Unit: 1712

polyesters, and polyamides covers a huge amount of types of polymers and it would have been obvious to one of ordinary skill in the art to have chosen at least one substrate from the group as instantly claimed and the adhesive of Kihara et al. because of the sheer volume and art applicability of these polymer substrates.

Regarding claims 8 and 13, the same reasoning as set forth above for claim 2 also applies to these claims, as the claimed subject matter is essentially the same.

Regarding claims 9 and 14, the same reasoning as set forth above for claim 3 also applies to these claims, as the claimed subject matter is essentially the same.

Regarding claims 10 and 15, the same reasoning as set forth above for claim 4 also applies to these claims, as the claimed subject matter is essentially the same.

Regarding claim 23, Kihara et al. do not appear to specifically disclose the instantly claimed inherent property. However, this appears to be an inherent property of the composition of Kihara et al. because the materials of Kihara et al. are the same as instantly claimed, and the same materials would have inherently yielded a product with the same inherent properties. If not inherent, then it would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Kihara et al. to have the same inherent property as instantly claimed because the materials of Kihara et al. are the same as applicant's.

### ***Allowable Subject Matter***

Claims 5, 19, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the



Art Unit: 1712

limitations of the base claim and any intervening claims. Regarding claim 5, a reasonable search of the prior art of record failed to reveal the limitations as set forth in this claim, specifically a monocarboxylic acid as an additional reactant to produce the curing agent. The prior art of record discloses dicarboxylic or higher acids, but do not teach or disclose these monocarboxylic acids.

Regarding claims 19 and 21, a reasonable search of the prior art of record failed to reveal the limitations as set forth in these claims, specifically a multilayered laminate comprising the instantly claimed substrates and the adhesive composition as instantly claimed. The prior art of record does not appear to teach or disclose this adhesive composition with an outer layer of polymer film and another outer layer of paper or metallic foil.

Claims 20 and 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Regarding claims 20 and 22, a reasonable search of the prior art of record failed to reveal the limitations as set forth in these claims, specifically a multilayered laminate as instantly claimed with the instantly claimed coating composition.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is

Art Unit: 1712

(703) 305-2778. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Christopher Keehan

*CMK*

April 3, 2003



Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700